Abstract of the Invention

A submersible turbine pump includes a power head enclosed in a casing. A vacuum source associated with the submersible turbine pump draws a vacuum in the interior space of the casing. A pressure sensor may be used to monitor the vacuum in the interior space to detect a leak in the power head or the casing. If a leak is detected, an alarm may be generated and the submersible turbine pump may be deactivated.